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Senator Steven C. Panagiotakos  
Senate Ways and Means

Representative Charles A. Murphy  
House Ways and Means

Senator Karen E. Spilka & Representative Brian S. Dempsey  
Joint Committee on Economic Development and Emerging Technologies

Senator Michael A. Morrissey & Representative Barry R. Finegold  
Joint Committee on Telecommunications, Utilities and Energy

Senator Anthony Petrucci, & Representative William Straus  
Joint Committee on Environment, Natural Resources and Agriculture

Dear Chairmen:

I am pleased to submit the enclosed report on "Renewable Energy and Energy Efficiency Potential at State-Owned Facilities."

Section 12 of the Green Jobs Act (Chapter 307 of the Acts of 2008) requires the Executive Office of Energy and Environmental Affairs (EEA) to commission a study investigating the clean energy sector in the Commonwealth. The enclosed study satisfies that mandate in part, providing "an examination of: ... (iv) real property owned by the commonwealth available and suited for the installation and operation of renewable energy generating facilities; [and] (v) energy efficiency opportunities on real property owned by the commonwealth...." Additional studies covering the future workforce needs of the clean energy sector, the current growth rate of the sector, and the current levels of private investment in the sector are forthcoming.

It is important to place this study in proper context. Six major energy and environmental statutes were enacted in the last legislative session, and together they place the Commonwealth on a new course. These laws require the Commonwealth to move aggressively to promote clean energy, cut energy costs, and curb greenhouse gas emissions.

The study I submit today finds that the Commonwealth has made considerable progress in improving the energy efficiency of state-owned facilities, reducing energy use and saving the state \$25 million a year in energy costs, but estimates that savings of at least that much again could be obtained with further investments. The Green Communities Act gives us the tools to accelerate dramatically this



progress on energy efficiency – saving money, reducing energy use, and shrinking the carbon footprint of our state agencies. In addition, Governor Patrick’s “Leading By Example” Executive Order 484 has helped to focus all agencies on realizing these opportunities.

The most striking findings in this report have to do with the renewable energy resource to be found on state-owned property. Small-scale wind projects identified for the grounds of state facilities have the potential to provide generating capacity of 57 MW; planned and potential solar installations on the rooftops of state-owned buildings could reach 32 MW, or 13 percent of Governor Patrick’s 2017 goal of 250 MW statewide. Adding in hydro and biomass power brings the renewable energy capacity up to 95 MW, sufficient to power 16,000 homes.

Also of great significance is the potential for 946 MW of wind power that could be located on state lands. The study finds that sites in many parts of the state offer potential for large-scale wind installations. See the map on page 3 and page 9 for some examples, and a longer list on page 13 for a more exhaustive survey of potential wind sites.

This analysis of the potential for wind energy on state land is strictly theoretical. Not all of these sites will necessarily be practical for wind development. Furthermore, it will take a careful balancing of public interests to decide how much of the renewable energy potential of these sites should be pursued.

These lands are predominantly under Article 97 protection for a variety of conservation- and recreation-related purposes. Some Article 97 lands are maintained in a natural state and used only for habitat protection and forms of recreation that have minimal environmental impact, such as hiking. But many Article 97 lands are preserved as working lands, where activities such as sustainable forestry or active recreation, including motorized vehicle use, also take place. For those lands that we treat as resources to be managed productively and sustainably, clean, renewable wind energy should be considered for its rightful place among those productive uses. Utilizing state lands for wind energy also holds the potential for making these lands economically productive for host communities, under revenue sharing arrangements associated with clean energy development.

Today, environmental stewardship has taken on new meaning. The threat of global climate change to our citizens and to natural areas alike cannot be ignored, and under the requirements of the Global Warming Solutions Act, which dictates a reduction of greenhouse gases of 80 percent by 2050, it must not be. We are duty bound to take every appropriate opportunity to replace fossil fuels with clean, renewable energy, and it would be an abrogation of our public responsibility not to consider the potential resource on state lands for meeting the environmental challenges of the 21<sup>st</sup> century.

I hope this report serves as a point of departure for a public discussion about how best this Commonwealth can use its public resources to protect the environment, conserve its natural heritage, and meet its clean energy needs for future generations.

Sincerely,

A handwritten signature in black ink, appearing to read "I. A. Bowles", written in a cursive style.

Ian Bowles,  
Secretary